

Appln. No. 09/544,742  
Response G dated June 25, 2004  
Reply to Office Action of 05/24/2004

**Amendments to the Claims:**

Please enter the claims as shown in the listing of claims hereinbelow.

**Listing of Claims:**

1. to 7. (canceled)

8. (currently amended) The A process [[of Claim 4]] of preparing a hydro-oxidation catalyst composition comprising gold on a titanium-containing support, for use in an oxidation process with oxygen in the presence of hydrogen, the preparation process comprising impregnating a gold compound and a reducing agent onto a catalyst support, wherein the molar ratio of reducing agent to gold is greater than 0.5:1, and wherein the catalyst support comprises titanium, and the reducing agent is an organic compound which does not contain titanium, the impregnation being conducted under conditions sufficient to prepare the hydro-oxidation catalyst composition.

9. (canceled)

10. (previously presented) A process of preparing a catalyst composition comprising gold on a titanium-containing support, for use in an oxidation process with oxygen in the presence of hydrogen, the preparation process comprising impregnating a gold compound and a reducing agent onto a catalyst support, wherein the reducing agent comprises titanium, under conditions sufficient to prepare the catalyst composition.

11. (previously presented) The process of Claim 10 wherein the reducing agent is an organotitanium compound characterized by the presence of a titanium-carbon  $\sigma$  or  $\pi$  bond.

12. (previously presented) The process of Claim 11 wherein the organotitanium compound is selected from the group consisting of alkyltitanium compounds and cyclopentadienyl titanium compound.

13. (original) The process of Claim 10 wherein the reducing agent is a titanium coordination compound.

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14. (previously presented) The process of Claim 13 wherein the titanium coordination compound is selected from the group consisting of titanium alkoxides and titanium carboxylates.

15. (original) The process of Claim 14 wherein the titanium coordination compound is titanyl acetylacetonate.

16. (previously presented) The process of Claim 10 wherein the gold compound is deposited onto the support prior to deposition of the titanium-containing reducing agent.

17. (previously presented) The process of Claim 10 wherein the process is conducted at a titanium loading of the titanium-containing reducing agent greater than 0.02 weight percent and less than 20 weight percent, based on the weight of the support.

18. (canceled)

19. (previously presented) The process of Claim 10 wherein the reducing agent contains titanium and the support is selected from the group consisting of silicas, aluminas, aluminosilicates, zirconia, magnesia, carbon, titania, and mixtures thereof.

20. (currently amended) The A process of Claim 1 of preparing a hydro-oxidation catalyst composition comprising gold on a titanium-containing support, for use in an oxidation process with oxygen in the presence of hydrogen, the preparation process comprising impregnating a gold compound and a reducing agent onto a catalyst support, wherein the reducing agent comprises titanium, or the catalyst support comprises titanium, or both the reducing agent and the catalyst support comprise titanium, wherein the process is conducted at a titanium loading on the support of greater than 0.02 weight percent and less than 20 weight percent, based on the weight of the support and under conditions sufficient to prepare the hydro-oxidation catalyst.

21. (previously presented) The process of Claim 10 wherein both the reducing agent and the support contain titanium.

22. to 32. (canceled)

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33. to 36. (canceled)

37. (canceled)

38. (previously presented) The process of Claim 10 wherein the gold compound is selected from the group consisting of chloroauric acid, sodium chloroaurate, potassium chloroaurate, gold cyanide, potassium gold cyanide, diethylamine auric acid trichloride, gold acetate, alkyl gold halides, and alkali aurates.

39. (previously presented) The process of Claim 10 wherein the process is conducted at a gold loading greater than about 10 parts per million by weight, based on the total weight of the gold and support.

40. (previously presented) The process of Claim 10 wherein at least one promoter metal compound is impregnated onto the support selected from the group consisting of silver, Group 1, Group 2, the lanthanide rare earth metals, the actinide metals of the Periodic Table, and mixtures thereof.

41. (previously presented) The process of Claim 40 wherein the total concentration of promoter metal or metals ranges from greater than about 0.01 to less than about 20 weight percent, based on the total weight of the catalyst.

42. (previously presented) The process of Claim 10 wherein the solvent for the impregnation is selected from the group consisting of water, organic solvents, and mixtures thereof, and optionally, wherein after impregnation, the support is washed.

43. (previously presented) The process of Claim 42 wherein after optional washing, the support is treated with a solution containing at least one promoter metal.

44. (previously presented) The process of Claim 10 wherein the impregnation is conducted to the point of incipient wetness or a point of lesser wetness.

45. (previously presented) The process of Claim 10 wherein the impregnation is conducted at a temperature between about 21°C and about 100°C.

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46. (previously presented) The process of Claim 10 wherein after impregnation and any additional steps of washing and treating with a promoter metal, the catalyst is heated in oxygen, or an oxygen-containing gas, or heated in an inert atmosphere, or heated in a reducing atmosphere.